



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

# UNITED STATES.

---

## MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HYGIENE.

[Adopted since July 1, 1911.]

PHILADELPHIA, PA.

PLUMBING, HOUSE DRAINAGE, PRIVIES, AND CESSPOOLS.

### *Registration.*

RULE 1. No person, firm, or corporation shall engage in the plumbing business, as master or journeyman plumber in the city of Philadelphia, or engage to erect, install, alter, repair, or make any addition to a plumbing or drainage system or systems in said city, unless such person, firm, or corporation shall furnish to the bureau of health a certificate from the duly appointed board of examiners certifying that such person, firm, or corporation is qualified to engage in said business as a master plumber, master plumbers, or journeyman plumber, and shall have registered his, their or its name or names and business or home address in the office of the bureau of health upon such form or forms as may from time to time be furnished and prescribed by said bureau of health, provided that the registration of any one member of a firm or corporation or of the superintendent or foreman thereof shall be deemed sufficient.

Every person, firm or corporation, qualified as herein provided, shall receive from said bureau of health a certificate of registration, which shall for the period of one calendar year or fractional part thereof next ensuing from the date of such registration entitle the person, firm, or corporation therein named to engage in and carry on the business of plumbing in the city of Philadelphia as a master plumber, master plumbers, or journeyman plumber.

### *Reregistration.*

RULE 2. At the expiration of each calendar year said certificate of registry shall be null and void. A registered master or journeyman plumber desiring to continue in the business of plumbing and drainage for the ensuing year shall, between the 1st and 31st days of December of each and every year, surrender the said certificate of registry for the then current year to the bureau of health and reregister his, their, or its name or names and business or home address as hereinbefore provided, for which reregistration a master plumber shall pay to the bureau of health the sum of \$1 and a journeyman plumber shall pay the sum of 25 cents. Any person, firm, or corporation engaged in the plumbing business, failing to reregister during the time specified, must present to the bureau of health a certificate from the board of examiners as to qualification before he, they, or it shall be reregistered.

### *Plumbers coming from other places.*

RULE 3. No person, firm, or corporation engaged in the business of plumbing and drainage in other places as master or journeyman plumbers desiring to do plumbing and drainage work in the city of Philadelphia shall enter upon such work until he, they, or it shall have qualified as hereinbefore provided in rule 1, except a person, firm, or corporation holding a license, or certificate, granted by any first, second, or third class city of this Commonwealth to engage in or work at the business of plumbing and house drainage. Such person, firm, or corporation shall be registered and allowed to enter upon such work without furnishing a certificate from the board of examiners; provided, however, that such registration shall be restricted and limited

August 9, 1912

to such plumbing and drainage work as he, they, or it shall have contracted for at the time of registry. On the completion of such contract or contracts the registration of such person, firm, or corporation shall be null and void, and no further permit shall be issued to such person, firm, or corporation until he, they, or it shall have first registered his, their, or its name or names and business address as hereinbefore provided.

*Registration for institutions, etc.*

RULE 4. A person upon presenting satisfactory proof of his ability may be registered as a master plumber for the care, alteration, or addition of the drainage system of a designated manufacturing or mercantile establishment, institution, hotel, etc., where it is necessary to have the continual service of a master plumber, and receive a certificate of registry; but in no case shall a person be permitted to do any plumbing or drainage work in any building or buildings other than that for which he is registered unless he has first secured a place of business, as provided for in rule 5 of these rules and regulations.

*Place of business.*

RULE 5. Every registered master plumber shall have a bona fide place of business in the city of Philadelphia, and shall display on the front of his or their place of business a sign, "Registered plumber," bearing the name or names of the person, firm, or corporation in letters not less than 3 inches high, except as provided for in rules Nos 3 and 4.

*Registered master plumbers only to engage in the plumbing business.*

RULE 6. No person other than a registered master plumber shall be allowed to carry on or engage in the plumbing or drainage business, nor shall any person or persons expose the sign of plumbing or house drainage, or any advertisement pertaining thereto, unless he or they shall have first been registered in the office of the bureau of health and received a certificate of registry. Nor shall any person or persons other than a registered master plumber (or a person in his or their employ or under his or their supervision) be allowed to alter, repair, or make any connections with any drain, soil, waste, or vent pipe, or any pipe connected therewith.

*No registered plumber to allow use of name.*

RULE 7. No person, firm, or corporation registered as a master plumber or master plumbers shall allow the use of his, their, or its name by any person or persons, directly or indirectly, for the purpose of obtaining a permit or permits to do any plumbing or drainage work.

*Certificates may be revoked.*

RULE 8. The certificate of registry granted under these rules and regulations may be suspended or revoked by the bureau of health when a master or journeyman plumber, firm, or corporation, or the registered representative thereof, shall violate any of these rules and regulations, and shall refuse or neglect to make the necessary corrections to work not approved by the bureau of health, within a reasonable time after notification thereof, or who shall permit the use of his, their, or its name by a person or persons for the purpose of obtaining a permit or permits to do plumbing and drainage work.

*Change of address.*

RULE 9. Every registered master or journeyman plumber, firm, or corporation shall give immediate notice of any change in his, their, or its place of business, and upon his, their, or its retirement from business shall surrender his, their, or its certificate of registry to the bureau of health.

*Names of each member of a firm, etc., to be given.*

RULE 10. Every person, firm, corporation, or representative thereof, in registering, shall give the full name or names of the person, firm, or officers' names of the corporation for which he or they shall register.

*Plans and specifications.*

RULE 11. The drainage of all buildings, public or private, and all alterations, extensions, and additions to drainage systems shall be executed in accordance with plans and specifications previously approved in writing by the bureau of health.

*Filing of plans and specifications.*

RULE 12. There shall be separate plans placed on file in the office of the bureau of health for each building, public or private, accompanied by specifications describing the drainage of said buildings on the blanks prescribed and furnished for this purpose, showing the size and kind of pipes, traps, water-closets, fixtures, etc., to be used, and must show partitions and method of ventilating water-closet apartments. Plans must be drawn legibly, in ink, and old work shall be shown in red ink. A fee of \$1 shall be paid the bureau of health for each plan approved.

*Owners to sign and furnish plans.*

RULE 13. All plans and specifications for drainage shall be signed in person and furnished by the owner of a building for which said plans are submitted for approval, and shall be prepared by the architect, where one is employed, except when good and sufficient reason is given; then plans and specifications may be signed and furnished by a duly authorized agent or attorney.

*Change in plans.*

RULE 14. No change will be permitted in plans and specifications after they have been approved, unless application is first made in writing by the owner or a duly authorized agent or attorney and the proposed change or amended plans have been submitted and approved in writing by the bureau of health.

*Plans to be submitted by the plumbers.*

RULE 15. Plans and specifications for drainage shall be submitted to the bureau of health for approval by the registered master plumber, whose name, business address, and register number shall be inserted in the space on the specifications provided for that purpose, and no plan will be approved or accepted by the bureau of health without said name, address, and registered number.

*Approval of plans.*

RULE 16. Plans will be approved or rejected within 24 hours when practicable, and under no circumstances will a delay beyond 10 days be permitted.

A certificate of approval will be issued in writing when a plan is deemed satisfactory by the inspector of house drainage.

*No verbal approval to be given.*

RULE 17. Under no circumstances whatever shall a verbal approval or permission given by anyone be considered a justification for any deviation from the approved plans, or the violation of any of the rules and regulations governing house drainage.

*Blanks for drawings.*

RULE 18. Blanks for drawings and specifications for drainage will be furnished on application at the office of the bureau of health. One vertical drawing will be sufficient for a building where it can be made to show all the work; if the work is intricate and can not be shown by one drawing, two or more shall be made.

A ground plan of the building showing the position of the main house and branch drains shall, in all cases, be submitted.

*Drainage of buildings erected prior to 1911.*

RULE 19. Whenever it shall come to the knowledge of the bureau of health or complaint in writing shall be made by any citizen that the plumbing or drainage in any building has become a nuisance or is contrary to the provisions and requirements of the act (June 7, 1911), or the ordinances of the city, or is of faulty construction or liable

August 9, 1912

to breed disease or endanger the health of the occupants, or upon the request of any owner or occupant of any building fitted with plumbing or drainage prior to the passage of the act (June 7, 1911), then the bureau of health shall direct the proper officer to examine the plumbing or drainage in any such building, and the said officer shall make a drawing of the plan of said plumbing, drainage, and sewer and ventilating shaft connections. He shall report his findings in writing to the bureau of health and suggest such changes as are necessary to make the same conform to the rules governing such matters.

The bureau of health shall thereupon notify the owner or agent of any such building of the changes which are necessary to be made in said plumbing or drainage. Said changes shall be made within the time fixed by the bureau of health, and upon refusal or neglect to obey such orders the bureau of health shall institute legal proceedings to have such changes made, and said nuisance abated by action before a justice of the peace or court of record, in which said action the owner or agent of said building may show in defense that the plumbing or drainage was not a nuisance or was not of faulty construction or out of repair, and in case of a building constructed subsequent to the passage of the act (June 7, 1911), said plumbing or drainage was not contrary to the provisions and requirements of the act (June 7, 1911) or ordinances of the city.

#### *Separate drainage.*

RULE 20. The entire drainage system of each lot and building must be separate and independent of that of any other lot or building, and shall be separately and independently connected with the public sewer in the street, fronting said lot or building, where one is provided, and where there is no sewer in the street and it is necessary to construct a private sewer to connect with one on an adjacent street, such plans may be used as may be approved by the board of health, but in no case shall a joint drain be laid in cellars parallel with street or alley.

#### *Main house drain.*

RULE 21. The main house drain shall be not less than 4 inches nor more than 10 inches in diameter, and the fall shall be not less than one-fourth inch per foot, except by special permission of the bureau of health, when it is shown that one-fourth inch fall per foot is impossible. It shall be laid in a trench cut at a uniform grade, or it may be constructed along the foundation walls above the cellar floor, resting on 9-inch brick piers laid in cement mortar (said piers to be not more than 7 feet apart), or it may be suspended from the floor by heavy iron hangers placed at intervals not greater than 7 feet. The use of pipe hooks, gas pipe, or iron driven into walls for supporting drains is prohibited.

#### *Material of drains.*

RULE 22. All house drains laid beneath the ground inside of buildings or beneath the cellar floor shall be plain extra-heavy cast-iron pipe with well leaded and calked joints.

All other drain, soil, or vent pipes connected with the main drain or any of its branches under ground or beneath the cellar floor shall be of plain extra-heavy cast-iron pipe. If the main house drain or its branches, soil, waste, or vent pipes are above the cellar floor or above ground they may be of plain cast-iron pipe, galvanized lap-welded wrought-iron, galvanized-steel, or brass pipe of the weights prescribed.

#### *Terra-cotta pipe.*

RULE 23. Where the ground is of sufficient solidity for a proper foundation, cylindrical terra-cotta pipe of the best quality, free from flaws, splits, or cracks, perfectly burned and well glazed over the entire inner and outer surfaces, may be used if laid on a smooth bottom with a special groove cut in the bottom of the trench for each hub, in order to give the pipe a solid bearing on its entire length, and the soil well rammed on each side of the pipe. The spigot and hub ends shall be concentric, The space between the hub and pipe must be thoroughly filled with cement mortar made of equal parts of the best Portland or American natural cement and bar sand thoroughly mixed dry and enough water afterwards added to give proper consistency. The mortar must be mixed in small quantities and used as soon as made. The joints must be carefully wiped out and pointed, and all mortar that may be left inside removed and the pipe left clean and smooth throughout, for which purpose a swab may be used. Terra-cotta pipe must not be laid closer than 5 feet to any exterior wall of a building or less than  $3\frac{1}{2}$  feet below the surface of the ground, nor will it be allowed in bad or made ground, or close to a well used for water supply.

*Coating for cast-iron pipes.*

RULE 24. After the test has been applied and approved by the inspector, cast-iron drain, soil, waste, and vent pipes may be coated, but in no case shall any coating be applied to cast-iron pipe for drainage until the test has been applied and approved.

*Arrangement of drain, soil, waste, and vent pipes.*

RULE 25. The arrangement of drain, soil, waste, and vent pipes shall be as direct as possible; all changes in direction on horizontal pipes shall be made with Y branches, one-sixteenth or one-eighth bends. Where the said pipes are vertical they shall extend in a straight line from the basement to a point at least 2 feet above the highest part of the building or contiguous property; where it is impossible to maintain a straight line, offsets may be used, which must have an angle of not less than 45° to the horizontal. Vertical soil or waste pipes receiving the discharge of a fixture or fixtures on any floor above the first shall be extended in full caliber at least 2 feet above the highest part of the building or contiguous property.

*Size of main house drains.*

RULE 26. The size of the main house drain shall be determined by the total area of the buildings, and paved surfaces to be drained according to the following table, if iron pipe is used. If the pipe is terra cotta, the diameter shall be one size larger for the same amount of drainage area.

Diameter. Inches.	Fall $\frac{1}{2}$ inch per foot.	Fall $\frac{1}{2}$ inch per foot.
	Square feet drainage area.	Square feet drainage area.
4	1,800	2,500
5	3,000	4,500
6	5,000	7,500
8	9,100	13,600
10	14,000	20,000

The main house drains may be decreased in diameter beyond a rain-water conductor or surface inlet, by the permission of the bureau of health, when the plans show that conditions are such as to warrant such decrease, but in no case shall the main house drain be less than 4 inches in diameter.

*Testing fittings.*

RULE 27. There shall be a fitting on the main house drain, just inside of the foundation of each building for testing purposes, except when the main trap is located inside of the cellar; then the testing fitting shall be next to the main trap on the house side. After the test has been applied, as required by rule 63, and has been approved by a house-drainage inspector, the opening in the testing fitting shall be hermetically sealed by inserting a solid plug with a calked lead joint.

*Cleanouts not to be placed on the sewer side of main trap.*

RULE 28. In no case shall a cleanout be located on the main drain pipe between the main trap and the sewer or on the sewer side of main trap.

*Cleanouts on traps.*

RULE 29. All traps shall be provided with cleanouts or hand holes on the side of trap nearest the fixture, and shall be protected by the water seal of trap.

*Covers for cleanouts.*

RULE 30. The covers of all cleanouts or hand holes inside of buildings shall be properly fitted and made air-tight by the use of a brass screw cap or plug, which shall be not less than one-eighth inch thick; where they screw into iron pipe they shall have a solid square nut three-quarters inch high or countersunk, with a diameter of not

August 9, 1912

less than 1½ inches. When the body of the cleanout ferrule is of cast iron it shall be equal in thickness to the cast-iron pipe to which it is to be connected. When of wrought iron it shall be equal in thickness to "Standard" wrought-iron pipe. When the screw cap and ferrule are both of brass they shall be one-eighth inch thick and the nut may be three-eighths inch high. The cleanout of a bath trap shall be covered with a brass screw cap, which shall be exposed on the floor close to the bathtub, and shall be on the side of the trap seal nearest the bathtub, and be protected by the water seal of the trap. Additional cleanouts shall be located at points on the drain pipes when it shall be deemed necessary by the bureau of health.

*Location of main trap.*

RULE 31. The main house drain shall be provided with a main or horizontal trap placed immediately inside the cellar wall nearest the sewer, or at the curb line where the sewer is outside the curb.

If the main trap is located in the cellar or inside of a building the iron main drain pipe shall extend to at least 10 feet beyond the foundation wall.

*Relieving arch.*

RULE 32. Where drains pass through a new foundation wall, a relieving arch shall be built over it with a 2-inch clearance on either side.

*Vertical soil, waste, and vent pipes.*

RULE 33. In all buildings where interior fixtures are connected directly with the drainage systems, and in all new buildings, there shall be a main vertical soil or ventilating pipe, which shall be not less than 4 inches in diameter.

*Location of soil, vent, and waste pipes.*

RULE 34. All soil, waste, and vent pipes shall be located inside of new buildings, and also in old buildings, except in old buildings where it is deemed inadvisable; then the pipes may be placed on the outside of the building, on the owner assuming all responsibility for the same in writing.

*Size of soil pipe.*

RULE 35. The size of soil pipes must be not less than those set forth in the following tables.

Horizontal lines are to be increased as fixtures are added, but verticals throughout their entire length are to have diameter given for the total number of fixtures which discharge into them. (The foregoing shall also apply to Rule 36.)

Vertical lines.	Number of water-closets.
Inches.	
4	1-12
5	13-25
6	26-40

If the building is 5 and less than 12 stories in height, the diameter shall be no less than 5 inches; if 12 stories or more, it shall be 6 inches in diameter.

Horizontal lines.	Number of water-closets.
Inches.	
4	1- 6
5	7-12
6	13-20

Small fixtures, in number not to exceed twice the number of water-closets, may discharge into the lines above specified without increasing their size.

*Size of horizontal and vertical lines of waste pipe. (See Rule 35.)*

**RULE 36.**

Horizontal and vertical lines.	Number of small fixtures.
Inches.	
1½	1
1¾	2
2	3-5
2¼	6-9
3	10-16
4	17-25
5	26-40
6	40-70

If the building is 5 to 10 stories in height, the vertical waste pipe shall be not less than 3 inches in diameter; if 11 to 16 stories, 4 inches; 17 to 21 stories, 5 inches; over 21 stories, 6 inches in diameter.

*Branch waste pipes.*

**RULE 37.** Waste pipes from washbasins, sinks, bathtubs, and urinals shall be not less than 1½ inches in diameter, and wash-tray waste pipes not less than 1½ inches in diameter; where they set in a range of three or more, the waste pipe shall be not less than 2 inches in diameter.

*Material of main drain, soil, waste, and vent pipes.*

**RULE 38.** All main drain, soil, waste, and ventilating pipes shall be of plain cast iron, galvanized lap-welded wrought iron, galvanized steel, or brass pipe.

*Lead waste pipes.*

**RULE 39.** Lead waste pipes may be used for short branches on horizontal lines and for vent connections that are 2 inches or less in diameter, and shall have not less than the following weight:

Diameter.	Weight per foot.
Inches.	Lbs. Ozs.
1	2 0
1½	2 8
1¾	3 8
2	4 0

*Waste pipes not connected directly.*

**RULE 40.** Where a separate line of waste pipe is used in old buildings not connected directly with the drainage system, it shall also be carried 2 feet above the highest part of the building or contiguous property, and the fixtures trapped, unless otherwise permitted by the board of health. Such waste pipes shall be discharged directly into a properly trapped cesspool located under the end of said waste pipe. In no case shall a waste pipe be connected with a rain-water conductor.

*Where no sewer is accessible.*

**RULE 41.** Where there is no sewer accessible the drainage of all fixtures (except water-closets), together with surface inlets and rain-water conductors, shall be drained separately to the curb line where practicable by drain pipes not less than 4 inches in diameter and discharge into the public gutter, unless otherwise permitted by the board of health.

*Waste pipes from refrigerators.*

RULE 42. No waste pipes from a refrigerator or other receptacle in which provisions are kept or stored shall be connected with any drain, soil, or other waste pipe, but shall be discharged into an open water supplied fixture, properly tapped. A refrigerator waste pipe shall be trapped and so arranged as to admit of frequent flushing, and shall be as short as possible.

*Waste pipes from filters and gas engines, etc.*

RULE 43. The discharge of waste pipes from water filters, gas engines, soda-water fountains, air compressors, or vacuum cleaners, shall not be connected directly with any drain, soil, or other waste pipes. They shall be discharged into an open fixture, properly trapped.

*Safe waste pipes.*

RULE 44. All drip or waste pipes from safe linings under fixtures shall be by a special pipe run to an open sink, outside of the house or to some conspicuous point, and be provided with a flap valve on the end of the pipe.

In no case shall any such pipe be connected with a drain, soil, or waste pipe.

*Overflows from tanks.*

RULE 45. The overflow pipe from a house supply tank shall be discharged on the roof where possible, and in such cases shall be brought down to within 6 inches of the roof, or it must discharge over a properly trapped water supplied fixture having a waste pipe equal at least to the overflow pipe. Emptying pipes from tanks shall be discharged in the same manner as required for overflow pipes, or they may be connected with the overflow pipe.

The overflow from water-closet tanks may discharge into the bowl of the closet.

In no case shall an overflow pipe be connected with any drain, soil or waste pipe.

*Antisiphon pipes.*

RULE 46. All antisiphon vent-pipe lines and main branches shall be plain cast iron, galvanized wrought iron, galvanized steel or brass pipe.

All traps shall be protected from syphonage, where antisiphon pipes are used; the main and branch vent pipes shall be increased in size as fixtures are added, as follows:

Diameters.	Maximum length.	Number and size of trap.
Inches.	Feet.	
1½	25	1-2 traps, 1½ or 4 inches.
2	50	1-5 traps, 3 or 4 inches.
2½	75	6-9 traps, 3 or 4 inches.
3	100	10-15 traps, 3 or 4 inches.
4	150	16-25 traps, 3 or 4 inches.
5	200	26-40 traps, 3 or 4 inches.
6	250	41-60 traps, 3 or 4 inches.

Four traps of 1½ inches in diameter shall be considered equal to one 4-inch trap.

*Vent and antisiphon pipes for traps.*

RULE 47. Vent or antisiphon pipes shall be connected to the side of the waste pipe as near the trap as practicable; water-closets and slop sinks having earthenware traps shall have the connection of vent with the branch soil or waste pipe. Branch vent pipes must be so constructed as to prevent obstruction.

*Connection of vent pipes.*

RULE 48. Vent or antisiphon pipes shall be extended through the roof or may be connected to the adjoining soil or waste pipes above the highest fixture, providing said soil or waste pipe is not more than 6 feet distant, or there are not fixtures on more than 6 floors.

Where the vent is connected to the soil or waste pipe the said soil pipe shall be increased 1 inch in diameter from the junction, except where the soil pipe is 4 inches or more in diameter and the vent pipe is 2 inches or less in diameter.

*Offsets on vent lines.*

RULE 49. All offsets must be made at an angle of no less than  $45^{\circ}$  to the horizontal, and all lines must be connected at the bottom with a soil or waste pipe, or the drain, in such a manner as to prevent the accumulation of rust scale. Branch vents must be kept above the top of all connecting fixtures, to prevent the use of the vent pipes as soil or waste pipes.

*Ventilation of branch or horizontal pipes.*

RULE 50. Every branch or horizontal soil or waste pipe to which a group of two or more fixtures are to be connected, and every branch line of horizontal soil pipe 8 feet or more in length to which a water-closet is to be connected, or a waste pipe 12 feet or more in length to which is to be connected a fixture, shall be ventilated either by extending said soil or waste pipe to at least 2 feet above the highest part of the roof or contiguous property, or by extending said soil to waste and connecting it with the main soil pipe above the highest fixture, or by ventilating or anti-siphon pipe, as provided for in rules Nos. 46, 47 and 48.

*Flues for vents.*

RULE 51. No brick, sheet metal, or earthenware flue or chimney flue shall be used as a sewer ventilator or to ventilate any trap, drain, soil, or waste pipe.

*All new buildings to have vent pipes.*

RULE 52. The drainage system of all new buildings, whether connected with a sewer, well, or discharged on the surface, shall be provided with a ventilating or soil pipe extending to at least 2 feet above the highest part of the roof of the building or contiguous property, not less than 4 inches in diameter.

*Materials and workmanship.*

RULE 53. All materials shall be of good quality, free from defects, and all work must be executed in a thorough and workmanlike manner.

*Cast-iron pipes.*

RULE 54. All cast-iron pipes and fittings must be uncoated, sound, cylindrical, and smooth, free from cracks, sand holes, and other defects, of a uniform thickness, and of full interior diameter as specified, and shall conform to the following relative weights :

	Weight per foot.	
	Stand- ard.	Extra heavy.
	Pounds.	Pounds.
2-inch pipe.....	4	5½
3-inch pipe.....	6	9½
4-inch pipe.....	9	13
5-inch pipe.....	12	17
6-inch pipe.....	15	20
7-inch pipe.....	20	27
8-inch pipe.....	25	37

All cast-iron pipes and fittings shall have the name of the manufacturer, size, and weight per foot cast on the exterior surface directly back of the hub of each length or section of pipe in characters not less than one-half inch in length.

*Wrought-iron and steel pipes and fittings.*

RULE 55. All wrought-iron and steel pipes must be lap-welded, properly tested by the manufacturer, and be equal in quality to "Standard."

No uncoated or plain black wrought-iron or steel pipe will be permitted.

Wrought-iron and steel pipe must be galvanized, and each length must have the weight and maker's name stamped on it. Fittings for vent pipes of wrought iron or steel may be the ordinary cast or malleable steam or water fittings.

Fittings for waste or soil pipes shall be special heavy cast iron recessed and threaded drainage fittings, with smooth interior waterway, and threads tapped so as to give a uniform grade to branches at least one-fourth inch per foot. All fittings for wrought-iron or steel pipe must be galvanized.

All joints to be screw joints, made up with red lead or other substance approved by the board of health, and the burr formed in cutting must be carefully reamed out.

*Weight and thickness of wrought iron and steel pipe.*

RULE 56. Wrought-iron and steel pipe shall be of full interior diameter, not less than the average thickness and weight set forth in the following table:

Diameter.	Thickness.	Weight per linear foot.
<i>Inches.</i>	<i>Inch.</i>	<i>Pounds.</i>
1½	.045	2.68
2	.154	3.61
2½	.204	5.74
3	.217	7.54
3½	.226	9.00
4	.237	10.66
4½	.246	12.49
5	.259	14.50
6	.280	18.76
7	.301	23.27
8	.322	28.16
9	.344	32.70
10	.366	40.00
11	.375	45.00
12	.375	49.00

*Brass pipe.*

RULE 57. All brass pipes used for soil, waste, vent pipes, and solder nipples must be thoroughly annealed seamless drawn brass tubing of "Standard" iron-pipe gauge with the exception of such brass pipes as may be used for overflows and waste pipes from bathtubs, between the trap and the tub, waste pipes from washtubs, standing waste pipes and traps of lavatories and sinks, from the floor or walls to the fixture, which may be of a gauge less in thickness than iron-pipe gauge, but in no case shall the walls of the pipe be less in thickness than No. 17 of Brown & Sharpe gauge. When brass pipes and traps are used, the walls of which are less in thickness than iron-pipe gauge, they shall have the number of the gauge stamped into the metal for inspection.

In the absence of the number of the gauge being stamped on said pipes and traps, it shall be deemed sufficient cause for its condemnation and the requiring of its removal from the work.

Threaded connections on brass pipe must be of the same size as iron pipe threads for same size of pipe and be tapered. Connections on brass pipe and between brass pipe and traps on iron pipe must not be made with slip joints or couplings. Nor shall any slip joint or coupling be used for a connection on the sewer side of any trap. The following average thickness and weights per linear foot of full interior diameter will be required for brass pipe:

Diameter.	Thickness.	Weight per linear foot.
<i>Inches.</i>	<i>Inch.</i>	<i>Pounds.</i>
1½	.045	2.84
2	.154	3.82
2½	.204	6.08
3	.217	7.93
3½	.226	9.54
4	.237	11.29
4½	.246	13.08
5	.259	15.37
6	.280	19.88

*Air inlets.*

RULE 58. There shall be an air inlet for fresh air entering the drain just inside the water seal of the main trap, and also at the rear end of the system when the vertical soil or vent pipe is located in the central part of the building and the main air inlet is deemed insufficient to ventilate the entire system.

*Where rear air inlets are not to be used.*

RULE 59. No air inlet shall be used at the rear end of a system of drainage when a water-closet is connected with a drain pipe and located in the cellar or basement, in the rear of a soil or vent pipe which extends to the roof. In such cases, in lieu of an air inlet, a vent pipe shall be extended to the roof at least 4 inches in diameter, as provided for vertical soil and vent pipes.

*Location of air inlets.*

RULE 60. Air inlets shall lead to the outer air and open at a convenient point; if located on the footway in the front of the building they shall be located at the curb line, and rear air inlets shall be located at a point at least 10 feet from the building. They shall have a perforated cover, having openings at least three-fourths of the diameter of the pipe.

If they are located on lawns or grass plots, they shall extend not less than 6 nor more than 15 inches above the surface of the ground and be protected by a return bend or a cowl securely fastened with bolts.

*Size of air inlets.*

RULE 61. Air inlets shall be of the same size as the drain up to 4 inches for 5 and 6 inch drains; they must not be less than 4 inches in diameter. For 8-inch drains not less than 6 inches or its equivalent, and for larger drains not less than 8 inches in diameter or its equivalent, unless otherwise permitted by the board of health.

*Air inlets not to open.*

RULE 62. In no case shall an air inlet open within 10 feet of any cold-air intake for a heater, window, shaft ventilating a basement or cellar, nor in front of doorsteps.

*Test.*

RULE 63. There shall be a test of atmospheric pressure of not less than 3 pounds to the square inch applied to the drainage system, including all soil, drain, vent, antisiphon pipes, and rain-water conductors inside of new buildings and of the new work in alterations or additions to drainage systems in old buildings, when alterations or additions are made to said systems, if, in the judgment of the health authorities, it is deemed necessary for the protection of health, and all defects discovered by this test shall be repaired at the owner's expense when so directed by the said health authorities. Said test shall extend to all drain pipes to a point at least 5 feet beyond foundation walls, excepting the pipe extending through the front foundation toward the sewer if the main trap is at the curb line and the clean-out or testing fitting is close to the inside of the said front foundation wall.

*Water test.*

RULE 64. Where it is considered impracticable to apply the air test, a water test may be applied to the horizontal lines of drains by special permission of the board of health, providing the pipe so tested is exposed to view in all its parts until after the test has been approved by the inspector.

The test shall be under a head of water at least 6 feet above all parts of the work to be tested, including all joints and connections.

*Plugs for testing.*

RULE 65. Openings in drain pipes shall be stopped for testing by a proper expansion plug, screw, cap, or plug. The use of plaster of Paris or any similar substance for this purpose is prohibited.

The material and labor for testing shall be furnished by the master plumber and the test applied by him or his representative in the presence of a house-drainage inspector.

August 9, 1912

*Fixtures not to be connected before test.*

RULE 66. No fixture shall be connected with a drainage system or any part thereof which requires testing under these rules until the test has been applied and approved by the inspector of house drainage.

*Defects.*

RULE 67. Defective materials and drainage work poorly constructed and unworkmanlike in manner, or which does not conform to these rules and regulations, shall be removed by the master plumber when condemned by the inspector of house drainage.

No cement, wax, grease, paraffin, plaster, sal ammoniac, sand, or other improper substance shall be used about any of the drainage system, and the presence of any foreign substance about a joint or any part of a drainage system shall be sufficient cause for condemning such joint or part of said system. Any split fittings, hubs, defective material not as specified in these rules and regulations which shall have been condemned by the inspector shall be removed from the work and not used again.

*Pipes not easily accessible.*

RULE 68. The drain, soil, and waste pipes and traps shall, if practicable, be exposed to view for the ready inspection at all times, and for convenience in repairing; when they are not easily accessible, extra-heavy pipes shall be used at the discretion of the bureau of health.

*Inspection.*

RULE 69. No drainage work shall be covered or concealed in any way until after it has been examined and approved by a house-drainage inspector.

Notice must be sent to the bureau of health in writing when the work is sufficiently advanced for inspection, giving location of property plan number, and character of work to be inspected, over the signature of the master plumber.

Immediately on the completion of the work application for final inspection must be made.

When work is ready for inspection, the plumbing contractor shall make such arrangements as will enable the proper officer to reach all parts of the building easily and readily, and also have present the proper apparatus and appliances for making tests and furnish such assistance as may be necessary to a proper application of same.

*Delinquent list.*

RULE 70. Failure on the part of a master plumber to make application for the inspection of any drainage work installed by him, application for final inspection or for the violation of any of the rules and regulations of the board of health governing house drainage, and failure to correct the fault after notification, shall be deemed sufficient cause to place the name of such master plumber on the delinquent list until he has complied with said regulations and rules.

Any attempt on the part of the master plumber or plumbers to construct or alter a system of drainage or any part thereof during the time his or their names appear on said delinquent list will subject him or them to prosecution.

*Wiped solder joints.*

RULE 71. All connections between lead pipes and lead or brass pipes, or between bends or traps and ferrules, shall be round, wiped solder joints. In no case will bit or cup joints be permitted.

*Joints on cast, wrought iron, steel or brass pipes.*

RULE 72. All joints on cast-iron pipe shall be made with picked oakum and molten lead, thoroughly caulked and make gas tight, 12 ounces of soft pig lead shall be used for each joint for each inch in the diameter of the pipe.

All joints in wrought iron, steel or brass pipes shall be screwed joints, made up with a paste of red lead or other substance as may be approved by the board of health, and made gas tight.

*Connections with earthenware traps and lead bends.*

RULE 73. Connections with earthenware traps and lead bends shall be by a heavy cast-brass floor plate one-fourth inch in the thickness fastened to the floor with screws or bolts, and soldered to the lead bend; the floor plate bolted to the flange of the traps and the joint made gas tight by a pure rubber gasket of not less than one-fourth inch thickness with one-eighth inch corrugation, three-fourths inch in width, or by a paste of proper consistency of red or white lead.

*Lead bends and traps.*

RULE 74. Lead bends and traps for water-closets and slop hoppers shall be not less than one-eighth inch in thickness; all other lead traps shall conform in thickness to the lead waste pipe to which they are to be attached.

The name of the manufacturer and the weight per foot shall be on each lead bend and trap.

*Brass ferrules and solder nipples.*

RULE 75. Cast brass ferrules and solder nipples shall be one-eighth inch in thickness and of full diameter, as specified. Brass pipe used for solder nipples shall be iron pipe gauge as specified in rule 57.

*Traps.*

RULE 76. No form of trap shall be used unless it has been approved by the board of health.

Every fixture shall be separately and effectually trapped by a water-sealing trap placed as near the fixture outlet as possible.

A set of washtubs or trays only may be connected with one trap.

The discharge from a fixture must not pass through more than one trap before reaching the house drain.

Traps shall not be more than one size larger than the waste pipe to which they are attached. All traps must be well supported and set true with respect to their water levels. Vent horns on earthenware traps are prohibited. Traps that depend on interior partitions for a seal, except earthenware ones, are prohibited.

All exposed or accessible traps, except water-closet traps, must have brass trap screws for cleaning.

All iron traps for house drain, yard and other drains, and rain-water conductors must have handholes, cleanouts of full size of the traps when same is less than 5 inches.

Traps for rain-water conductors shall have a water seal of not less than 5 inches.

Iron traps for rain-water conductors, areas, floor, and other drains shall be not less than 3 inches in diameter.

Traps for bath tubs must have cleanouts exposed on the floor of bath rooms. The body of such traps shall be not less than  $2\frac{1}{2}$  inches in diameter, and the cleanout must be protected by a water seal of not less than  $1\frac{1}{2}$  inches in depth.

*Strainers.*

RULE 77. All fixtures other than water-closets and urinals must have strong metallic strainers, or bars over the outside to prevent obstruction of the waste pipe.

Strainers for cesspools shall have openings equal in area to not less than three-fourths the area of the drainpipe to which cesspool connects.

*Water-closets.*

RULE 78. For all sewer-connected buildings occupied or to be occupied there must be at least one water-closet, and there must be an additional water-closet for every 15 occupants or fractional part thereof.

*Water-closets in lodging houses.*

RULE 79. In lodging houses there shall be one water-closet for every 15 single beds or accommodations for every 15 lodgers or fractional part thereof, together with sufficient urinal accommodations.

*Water-closets not to be supplied from supply pipes.*

RULE 80. No water-closet of any description shall be supplied with water or flushed directly from the water-supply pipes.

*Water-closets supplied with water from tanks.*

RULE 81. All water-closets of every description shall be supplied with water from special tanks or cisterns, which shall hold not less than 8 gallons of water when up to the level of the overflow pipe for each closet supplied, except automatic or siphon tanks, which shall hold not less than 5 gallons of water for each closet supplied. The water in said tanks shall not be used for any other purpose.

*Flushing rim bowls, no inclosures, etc.*

RULE 82. All water-closets must have flushing rim bowls, and all plumbing fixtures must be set open and free from all inclosing woodwork. Where water-closets will not support a rim seat, the seat must be supported on legs of galvanized iron, or noncorrosive material, and a drip tray, enameled on both sides, secured in place, shall be used.

*Low-down water-closets.*

RULE 83. Low-down tank water-closets shall be of siphon pattern.

*Types of water-closets prohibited.*

RULE 84. Pan, valve, plunger, offset washout, and other water-closets having an unventilated space, or whose walls are not thoroughly washed at each discharge, are prohibited.

*Latrines, etc.*

RULE 85: Latrines, range, trough, long-hopper water-closets, and similar appliances will not be permitted inside of a building. Where they are used in a special building, outside of the building proper, they shall be iron enameled inside and outside, and supplied and flushed with water from special reservoirs, and not located within 20 feet of a building when practicable.

*Floors impervious to moisture.*

RULE 86. In tenement houses, where two or more closets are in a group, lodging houses, factories, workshops, saloons, public buildings, and in all places where water-closets and urinals are for public use, the floor of the entire toilet room in which water-closets and urinals are located, and side walls to a height of at least 16 inches from the floor, except at the door, must be made waterproof with asphalt, cement, tile, slate, or other material impervious to moisture, approved by the board of health.

*Water-closets not to be located.*

RULE 87. Water-closets must not be located in the sleeping apartments nor in any room where food is prepared for human consumption of any building, nor in any room or apartment which has not direct communication with the external air, either by a window or air shaft, having an area to the open air of at least 4 square feet.

Hopper water-closets shall not be located within 8 feet of any building when practicable, nor have any opening whatever directly communicating with any building or inclosed shed, frame, or otherwise.

No water-closet accommodations for a tenement or lodging house shall be located in the cellar, basement, or under sidewalk.

*Yard water-closets.*

RULE 88. When water-closets are placed in the yard they shall be so arranged as to be adequately flushed from a reservoir; their water supply pipes shall be protected from freezing by placing them in a pit at least  $3\frac{1}{2}$  feet below the surface of the ground; the walls of said pit shall be of brick or stone, not less than 9 inches thick, laid in cement mortar.

The waste water from the stopcock or valve shall be conveyed to the drain pipe through a three-eighths inch lead pipe, properly connected.

*Inclosure of yard water-closets.*

RULE 89. The inclosure of yard water-closets shall be ventilated by slatted openings or movable sash windows, and there shall be a trap door in the floor of sufficient size for access to the pit. The door shall open to the outer air. In no case shall there be any communication directly between the water-closet inclosure and the building proper, or inclosed shed, frame, or otherwise.

*Ventilation of interior water-closet apartments.*

RULE 90. In all buildings where water-closet apartments are partitioned off from a room used for other purposes the outside partitions of such apartments shall extend up to the ceilings or be ceiled over, and these partitions must be to all intents and purposes air tight.

The outside partition must include a window, opening to the outer air on the lot whereon the building is situated or on the street, or it shall be ventilated by an air shaft opening to the outer air, having an area of at least 4 square feet. Where there is more than one water-closet apartment having an opening into an air shaft the said shaft shall have an area equal to 4 square feet of area for each water-closet apartment, unless otherwise permitted by the board of health.

Interior partitions of a water-closet apartment shall be dwarf partitions.

Where it is necessary to properly light such apartments the upper part of the outside partition shall be made of glass. This rule shall also apply to the apartments for urinals.

*Water supply for fixtures.*

RULE 91. All water-closets and other plumbing fixtures must be provided with a sufficient supply of water for flushing to keep them in a proper and cleanly condition.

*House supply tanks.*

RULE 92. House supply tanks must be covered so as to exclude dust, and must be so located as to prevent the water from being contaminated by gas and odors from plumbing fixtures. Tanks must be of wood, iron, or wood lined with tinned and planished copper.

Tanks must be supported as directed and approved by the building inspectors.

*Water-closet supply tanks.*

RULE 93. A group of water-closets and urinals may be supplied from one tank, but water-closets and urinals on different floors shall not be flushed from one tank, except where a separate valve device is used on the flushing pipe of each water-closet; said device shall insure a sufficient water supply and not be subject to syphonic action.

But in no case shall such valve device be used on water-supply pipes connected directly with the street main.

The flushing pipe of each and every water-closet when fitted with a valve device shall be provided with a separate stopcock or valve of proper size.

Tanks or cisterns shall be of such capacity as to insure at all times a sufficient water supply for water-closets and urinals, and the water from said tanks or cisterns shall not be used for any other purpose.

*Tanks prohibited.*

RULE 94. Plain and painted iron tanks or cisterns for water-closets and urinals are prohibited.

Copper lining for water-closet and urinal tanks or cisterns shall not be less than 12-ounce copper, and the weight must be stamped in the metal at the top of the tank.

*Flushing pipes.*

RULE 95. The flushing pipes for water-closets shall be not less than  $1\frac{1}{4}$  inches in diameter, and the flush couplings must be the full size of the flush pipe.

*Replacing water-closets.*

RULE 96. Whenever a water-closet of the prohibited type is replaced the reconstruction of adjacent small fixture wastes and vents required to bring them into conformity with these rules and regulations shall be performed, and the soil stack also extended at least 2 feet above the highest part of the building or contiguous property.

August 9, 1912

If a water-closet is placed on a soil pipe which has been or is also used as a rain-water conductor, or any additional connection is made to such a soil pipe, then the rain water shall be diverted from such soil pipe and carried to the house drain by a proper independent pipe and trapped as provided for rain-water conductors, and the soil pipe extended above the roof as required for soil pipes.

#### *Urinals.*

RULE 97. All urinals must be constructed of materials impervious to moisture that will not corrode under the action of urine. The floors and walls of urinal apartments must be lined with similar noncorrosive and nonabsorbent material.

Iron trough urinals must be enameled iron inside and outside; no plain or painted iron urinals will be permitted.

Urinals inside of a building must be flushed by a special tank or cistern, the flush pipe of which is not less than 1 inch in diameter.

#### *Rain-water conductors.*

RULE 98. All buildings shall be kept provided with proper metallic leaders for conducting water from the roofs in such manner as shall protect the walls and foundations of said building from injury. In no case shall the water from said leaders be allowed to flow upon the sidewalk, but the same shall be conducted by a pipe or pipes to the sewer. If there is no sewer in the street upon which said buildings front, then the water from said leaders shall be conducted by proper pipe or pipes below the surface of the sidewalk to the street gutter.

Inside leaders must be constructed of cast iron, wrought iron, or steel, with roof connections made gas and water tight by means of a heavy lead or copper-drawn tubing, wiped or soldered to a brass ferrule, or nipple calked, or screwed into the pipe. The tubing must extend at least 7 inches into iron leader pipe. Outside leaders may be sheet metal, but they must connect with the house drain by means of a cast-iron pipe extending vertically 5 feet above the grade level.

Rain-water conductors may be connected with the upright soil pipe of a hydrant cesspool, providing said cesspool does not receive the discharge from waste pipes.

Rain-water leaders must be trapped with cast-iron traps, so placed as to prevent freezing, and have a seal of at least 5 inches, except those placed inside of a building that are gas tight, and do not open near a window or air shaft, ventilating rooms. In such cases the trap may be omitted by special permission of the board of health.

Rain-water leaders must not be used as soil waste or vent pipe, nor shall such pipes be used as a leader.

#### *Steam exhaust and blow-off.*

RULE 99. No steam exhaust, boiler blow-off, drip pipe, hot water or other hot liquid shall discharge into a house drain inside of the main trap or a soil pipe; such discharge must first be to a condensing or cooling tank of proper dimensions and construction, and provided with a vapor pipe not less than 4 inches in diameter of wrought iron, with screw joints. The discharge pipe from the condensing tank shall connect with the house drain on the sewer side of the main trap, and be provided with such traps as may be necessary to prevent the ingress of sewer gas or air.

This rule shall not be construed to apply to ordinary boilers connected with a range of a dwelling, except that no sediment cock shall directly connect with the drain or waste pipe.

#### *Drainage of fixtures below sewer level.*

RULE 100. All fixtures in a basement below the level of the sewer shall discharge into a sump or receiving tank, made air tight, and ventilated by extending a vent pipe not less than 4 inches in diameter to a point at least 2 feet above the highest part of the building or contiguous property. And the contents of said sump or tank lifted and discharged into the drainage system by some approved method, or an improved ejector may be used to lift the sewage to the drainage system.

#### *Floor and subsoil drains.*

RULE 101. Floor and other drains in cellars will only be permitted when it can be shown to the bureau of health that it is absolutely necessary, and arrangements are made to maintain a permanent water seal, the drainage system is properly ventilated, and the branch pipe for floor drain provided with a back pressure valve. Subsoil or drains for draining cellars shall be constructed as follows: By a system of French

drains or field tile to a catch basin or receiving tank properly flagged or covered over, the outlet pipe shall be properly trapped and connected with the house drain, and be provided with a back pressure valve the required size with accessible cleanout.

If the catch basin is below sewer level, the contents shall be lifted by an approved method and discharged into the house drain.

Catch basins or receiving tanks for subsoil drainage shall have a ball cock attached to the water-supply pipes, in order to maintain a water seal up to the level of the outlet pipe, which shall be trapped by turning a bend down into the water of the basin or tank. A flap valve located in the bells of pipes will not be permitted.

#### *Area, yard, and hydrant drains.*

RULE 102. The yard of each lot must be provided with a cesspool for surface drainage, connected with the drainage system, and no surface water is permitted to drain to a surface watercourse by way of an alley or the highway, except in districts where adequate sewers are not provided.

Cesspools for the reception of discharge from surfaces, hydrants, and waste pipes shall not be less than 12 inches in diameter, and be trapped in a manner accessible for cleaning out.

Area drains when connected with the house drains shall have not less than 3-inch connections; they should be controlled by one trap (if possible, the rain-water trap), and must be provided with permanent metallic strainers.

#### *Sewage disposal.*

RULE 103. No plant or system for the disposal of sewage shall be constructed or maintained within the limits of the city of Philadelphia, either by means of Eroad irrigation, subsoil irrigation, wells, or otherwise, except that it is shown that the proposed system can be maintained without nuisance or danger to public health, and detailed plans of said system are submitted, approved, and permit issued by the bureau of health for its construction.

#### *Wells for sewage.*

RULE 104. In districts where the public-sewer system is unavailable and there is sufficient ground for the purpose, on the approval of the bureau of health a tight well may be used to receive the discharge of house sewage, which may be overflowed to an absorption well, providing there is no danger of contaminating a water supply well or spring and the soil is of an absorbent character, otherwise a tight well only will be permitted to receive the discharge of water-closets, and the waste from all other fixtures shall discharge to a surface watercourse as provided in rule 41.

#### *Construction and location of drainage wells.*

RULE 105. A tight well for drainage shall not be less than 4 feet in diameter by 10 feet deep in the clear, or its equivalent, lined with hard brick 9 inches thick, laid in cement mortar and made water-tight, and flagged or arched over.

An absorption or loose well shall not be less than the dimensions of the tight well, lined with dry brick or stone. Both tight and loose wells shall be provided with a 24-inch cast-iron cover and frame, and said wells shall not be located within 40 feet of any building when practicable, or within 2 feet of party lines.

#### *Privy vaults or cesspools.*

RULE 106. No privy vault or cesspools for sewage shall hereafter be constructed in any part of the city where a sewer is at all accessible, which shall be determined by the bureau of health; nor shall it be lawful to continue a privy vault or cesspool on any lot, piece, or parcel of ground abutting on or contiguous to any public sewer within the city limits. The bureau of health shall have power to issue notice, giving at least three months' time to discontinue the use of any cesspool and have it cleaned and filled up. No connection from any cesspool or privy vault shall be made with any sewer; nor shall any water-closet or house drain empty into a cesspool or privy vault.

#### *Constructing privy vaults or wells.*

RULE 107. Privy vaults or wells must be constructed as follows: Each building situated on an unsewered street must have a privy vault or well, not less than 4 feet in diameter and 10 feet deep in the clear, lined with hard brick 9 inches thick laid in cement mortar and made water-tight.

August 9, 1912

*Location of privy wells.*

RULE 108. Privy wells shall not be located within 2 feet of party lines or within 20 feet of a building when practicable, and before any privy vault or well or cesspool for drainage shall be constructed, application shall be made and permit issued for the same by the bureau of health.

*Abandoning of privy wells.*

RULE 109. When a privy vault or well is to be abandoned it must be cleaned by having its contents removed, and thoroughly disinfected by a licensed excavator, who shall notify the bureau of health the well has been cleaned to the bottom and apply for an inspection of the same; on the approval of a house-drainage inspector it shall be filled with fresh earth. In no case shall a privy well be filled until its contents have been entirely removed and it has been inspected and approved by the inspector.

*Pipes to be supported.*

RULE 110. All vertical pipe lines must be supported and at their base supported by a brick pier or heavy iron hanger from the cellar ceiling beams.

*Smoke or peppermint test.*

RULE 111. A smoke or peppermint test shall be applied to a drainage system by the plumber, in the presence of the inspector, when it is deemed necessary by the bureau of health. Where the peppermint test is used, two ounces of peppermint must be provided for each line up to 5 stories and basement in height, and for each additional 5 stories or fraction thereof 1 additional ounce of peppermint for each line must be provided.

*Fittings not to be used.*

RULE 112. Short quarter bends, double hubs, offsets less than an angle of 45° to the horizontal, are prohibited; saddle hubs will only be permitted to be used in old work by special permission of the bureau of health.

*Drilling and tapping.*

RULE 113. In old work, where the conditions are such that ample threads may be obtained, drilling and tapping is permitted.

*Wooden fixtures prohibited.*

RULE 114. Wooden bathtubs and wooden washtubs are prohibited. Wooden bathtubs lined with metal, formerly in use, shall not be installed in any other building other than that in which they were located originally.

*Main trap to be located in old work.*

RULE 115. When a soil stack is added, or any alteration or addition is made to a drainage system, and there is no main trap or air inlet on said system, such appliances shall be provided.

*Soil lines to be extended before testing.*

RULE 116. No test shall be made by the inspector of any drainage work until every vertical soil and ventilating pipe shall have been extended above the roof to the height required.

*Repairing of terra-cotta pipes, etc.*

RULE 117. No terra-cotta drain inside a building or within 5 feet of a foundation wall, when in a leaky or defective condition, shall be repaired or replaced to a greater length than 9 feet; otherwise, the entire terra-cotta pipe shall be removed and replaced with cast-iron pipe of the weights prescribed.

Where excavations are made which would leave terra-cotta pipe above ground or above cellar floor, such terra-cotta pipe shall be removed and pipe substituted as is required for new work.

*Slope.*

RULE 118. All drain and waste pipes must be run at uniform grade. Antisyphon and ventilating pipes, where not vertical, must have a contiguous slope to avoid collection of water by condensation or accumulation of rust scale.

*Submerged fixtures supplies.*

RULE 119. All fixtures and tanks which have their water supply at or near the bottom shall have check valves on the water supply close to the fixture or tank, in order to prevent the water from said fixture or tank being returned through the supply pipes.

*Terms used.*

RULE 120. The term "master plumber," as used in these rules, shall be taken to mean a person who has an established place of business and who, either as principal or as the representative of any person, firm, or corporation, represents himself as competent and qualified, and undertakes to construct, alter, or make additions, or who, for himself or for any person, firm, or corporation, undertakes to and does construct, alter, or make any additions to a system of house drainage.

The term "journeyman plumber," as contained in these rules, shall be taken to mean a plumber who is engaged in and working at the business of plumbing for and under the supervision of a master plumber.

The term "bona fide" place of business, as used in these rules, shall be taken to mean a place having a workroom or shop, equipped with the tools necessary and requisite for the proper installation of plumbing and drainage work, and has displayed on its front a sign as required by these rules, either with or without a showroom.

The term "private sewer" is applied to sewers that are not constructed by the bureau of surveys for the city of Philadelphia.

The term "street sewer" is applied to public sewers in the streets constructed by the bureau of surveys for the city of Philadelphia.

The term "house drain" is applied to the horizontal drain and its branches, extending to and connecting with the private sewer, public sewer, or cesspool.

The term "main drain" is applied to the main or principal line of drainpipe connected with a cesspool or sewer and to which branch drainpipes are connected.

The term "soil pipe" is applied to any vertical pipe, extending through the roof or not, which receives the discharge of one or more water-closets with or without other fixtures.

The term "waste pipe" is applied to any pipe receiving the discharge from any fixture except water-closets and also to any vertical pipe extending through the roof receiving the same character of discharge.

The term "vent and antisiphon pipes" are applied to any special pipe provided to ventilate the system of drainage and to prevent trap siphonage and back pressure.

The term "air inlet" is applied to a pipe connected with the drainpipes for the purpose of admitting fresh air from or near the surface of the ground.

*Disputes.*

RULE 121. In case of any dispute or difference of opinion existing between the bureau of health and any person, firm, or corporation, as aforesaid, regarding the construction of plumbing, house drainage, or cesspools, the same shall be submitted by either party to the director of the department of public health and charities, or the presiding officer of the bureau of health, who shall pass upon same, and whose findings therein, after hearing, shall be final and conclusive upon all parties.

*Penalty.*

RULE 122. Any person or persons who shall fail to comply with any of the provisions of the act of assembly governing house drainage, approved June 7, 1911, regarding the procuring of a license or certificate to engage in or work at the business of plumbing or house drainage shall be liable to a fine of not less than \$10 nor exceeding \$50 for each and every day he or they shall engage in or work at said business without first having obtained said certificate or license; and any person or persons who shall violate any of the rules, regulations, or requirements made by the board of health in accordance with the provisions of the act regarding the construction, reconstruction, or testing of plumbing, house drainage, or cesspools shall be liable, for every such offense,

August 9, 1912

to a fine of not less than \$10 nor more than \$50, which fines shall be recoverable before any alderman or police magistrate in said cities by summary proceedings and shall be sued for in the name of said cities and, when collected, shall be paid into the treasury thereof.

All fines and penalties imposed by the act are recoverable by summary proceedings before any police magistrate or justice of the peace in said cities, and all suits or actions at law instituted for the recovery thereof are to be in the name and for the use of the city within or against which offense is committed, and upon recovery thereof all such fines and penalties are to be paid to the city treasurer thereof. In default of the payment of any fine or penalty imposed by any police magistrate or justice of the peace under the provisions of the act the person or persons so offending may be committed to the jail, workhouse, or other penal institution of the county in which said city is situate for a period not exceeding 30 days. [Regulations board of health, adopted Oct. 21, 1911.]